

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A node connectable to a home network of a communication system, comprising:

a processor for receiving a plurality of associated link-layer addresses, each of said link-layer addresses designating a physical link-layer connection related to one of a plurality of nodes in a home network;

said node being ~~[[connectable]]~~ adapted to communicate with a foreign network having a plurality of associated link-layer addresses, each of said link-layer addresses designating a physical link-layer connection ~~[[related to]]~~ between one of a plurality of mobile nodes ~~[[to]]~~ and said foreign network, and being further adapted to communicate using an information packet that can comprise any one of a plurality of message types to update a data table entry on a plurality of nodes, said information packet including a generalized link-layer address extension that has a type data field, a length data field indicating the length of the link-layer address data field and ~~[[the]]~~ a sub-type data field, ~~[[a]]~~ the sub-type data field designating the link-layer address protocol used on the foreign network, and a link-layer address data field designating the link-layer address of the physical link-layer connection to at least one mobile node associated with said home network.

2. (Previously Amended) The node connectable to a home network of Claim 1, wherein an assigned link-layer address for one of the mobile nodes changes as that mobile node moves to another network.

3. (Previously Amended) The node connectable to a home network of Claim 1, wherein the information packet is transmitted by one of said networks to inform the mobile node of its assigned link-layer address on that network.
4. (Previously Amended) The node connectable to a home network of Claim 1, wherein the information packet is transmitted by one of the mobile nodes to inform one of said networks of its assigned link-layer address.
5. (Previously Amended) The node connectable to a home network of Claim 1, wherein the information packet informs a correspondence node of an assigned link-layer address.
6. (Previously Amended) The node connectable to a home network of Claim 1, wherein a link-layer address is used to route information packets to one of said mobile nodes.
7. (Previously Amended) The node connectable to a home network of Claim 1, wherein the link-layer sub-type further comprises a transmission protocol designation.
8. (Previously Amended) The node connectable to a home network of Claim 1, wherein the link-layer sub-type further comprises a system type designation.

9. (Currently Amended) A method of communicating a physical connectivity on a first communication network comprising the steps of:

connecting a mobile node identified using an address associated with a home network to said first communication network through said physical connectivity designated by a link-layer address extension to an address associated with the network of the physical connectivity; and

transmitting a first information packet on said first communication network, wherein said first information packet can comprise any one of a plurality of message types received at a plurality of nodes to update data table entries associated with said mobile node, and supporting a generalized extension containing said link-layer address, a sub-type data field identifier that specifies the link-layer addressing used on the first communication network, and a type data field designation identifying the extension as a link-layer address extension containing the link-layer address for the physical connectivity of said mobile node to said first communication network used for routing information packets to said physical connectivity.

10. (Original) The method of communicating a physical connectivity on a first communication network of Claim 9, wherein the link-layer address is used to route a second information packet to the mobile node.

11. (Original) The method of communicating a physical connectivity on a first communication network of Claim 9, wherein the mobile node receives the first information packet.
12. (Original) The method of communicating a physical connectivity on a first communication network of Claim 9, wherein the mobile node transmits the first information packet.
13. (Original) The method of communicating a physical connectivity on a first communication network of Claim 9, further comprising the steps of:
- providing a second communication network linked to the first communication network; and
 - receiving the first information packet at said second communication network to inform the second network about the physical connectivity of said mobile node.
14. (Original) The method of communicating a physical connectivity on a first communication network of Claim 9, further comprising the steps of:
- providing a correspondence node with a communication link to the mobile node; and
 - receiving the first information packet at said correspondence node.

15. (Original) The method of communicating a physical connectivity on a first communication network of Claim 9, further comprising the steps of:
- providing a router on a communication network; and
 - receiving the first information packet at said router.
16. (Previously Amended) The method of communicating a physical connectivity on a first communication system of Claim 9, wherein the first information packet is processed to update a data table on a plurality of routers.

17. (Currently Amended) A node connectable to a communication network and capable of receiving an information packet transmission [[and said information packet]] comprising:

the node being adapted to receive an information packet having a generalized link-layer address extension to a network address for routing information packets, said link-layer address extension includes a type data field, a length data field, a sub-type data field indicating association with a specific node of a plurality of nodes on said network, and a link-layer address data field, wherein

said link-layer address data field provides the link-layer routing address information used to route information packets to the physical connectivity of said mobile node to the communication network; and

said information packet can comprise any one of a plurality of message types exchanged between a plurality of nodes, and each said information packet supports an extension data format used to update stored information on the plurality of nodes with routing address information for a physical connectivity for at least one specified node.

18. (Currently Amended) The node connectable to a communication network and capable of receiving an information packet transmission [[information packet for transmission on a communication network having connectivity to a mobile node]] of Claim 17, wherein the link-layer address is used by the communication network to route information packets to the mobile node.

19. (Currently Amended)) The node connectable to a communication network and capable of receiving an information packet transmission [[information packet for transmission on a communication network having connectivity to a mobile node]] of Claim 18, wherein the mobile node includes a correspondence node.
20. (Currently Amended)) The node connectable to a communication network and capable of receiving an information packet transmission [[information packet for transmission on a communication network having connectivity to a mobile node]] of Claim 17, wherein a data table is updated with said link-layer address on a plurality of routers.